

Nagorny, A.F.

Gasolite nitrate. D. Sh. Borina, B. L. Glibas, R. P. Lashovskii, P. A. Voronin, A. B. Tselikov, T. I. Gerasimova, P. D. Yakubovskii, A. F. Nagorny, and B. S. Rubinson. U.S.S.R. 166,838, Aug. 25, 1967. CaCN<sub>2</sub> is treated with NH<sub>4</sub>NO<sub>3</sub>. To prevent explosion, an intermediate melt is prepd. contg. H<sub>2</sub>O, CaCN<sub>2</sub>, and NH<sub>4</sub>NO<sub>3</sub> in a ratio of 1:2:14. To this is gradually added CaCN<sub>2</sub>, while the melt is kept at 62-70°. M. Hoach

// MB

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1-4E3d  
1-4E4j

CHUKHNO, A.A.; KOZLOV, G.A.; KASHCHENKO, A.I.; AGANBEGYAN, A.G.; VOLKOV, M.I.; ZHUKOVSKIY, Ya.M.; NAGORNIY, A.F.; TSAGOLOV, N.A.; KOVALEVA, M.F.; PAVLOV, P.M.; ATLAS, M.S.; KATS, A.I.; NAROVLYANSKIY, N.G.; ANCHISHKIN, I.A.; SPIRIDONOVA, N.S.; KRONROD, Ya.A.; SULIMOV, I.A.; BREGEL', E.Ya.; ROZENMAN, Ye.S.; VARTANYAN, K.A.; NOVIKOV, V.A.; GATCVSKIY, L.M.

Structure and content of the course on the economics of socialism.  
Vop. ekon. no.6:57-143 Je '62. (MIRA 15:6)

1. Kiyevskiy gosudarstvennyy universitet (for Chukhno). 2. Vysshaya partiynaya shkola pri TSentral'nom komitete Kommunisticheskoy partii Sovetskogo Soyuza (for Kozlov, Volkov, Zhukovskiy). 3. Yaroslavskiy gosudarstvennyy pedagogicheskiy institut (for Kashchenko, Narovlyan-skiy, Sulimov). 4. Institut ekonomiki i organizatsii promyshlennogo proizvodstva Sibirskogo otdeleniya AN SSSR (for Aganbegyan).
5. Institut povysheniya kvalifikatsii prepodavateley obshchestvennykh nauk pri Kiyevskom gosudarstvennom universitete (for Nagornyy).
6. Moskovskiy gosudarstvennyy universitet (for TSagolov, Spiridonova).
7. Akademiya obshchestvennykh nauk pri TSentral'nom komitete Kommu-nisticheskoy partii Sovetskogo Soyuza (for Kovalova). 8. Leningradskiy finansovo-ekonomicheskii institut (for Pavlov). 9. Moskovskiy finansovyy institut (for Atlas). 10. Nauchno-issledovatel'skiy institut truda (for Kats). 11. Institut ekonomiki AN SSSR (for Anchishkin, Kronrod). 12. Moskovskiy ekonomiko-statisticheskii institut (for Bregel'). 13. Moskovskiy energeticheskii institut (for Bregel').

(Continued on next card)

CHUKHNO,---(Continued) Card 2.

(for Rozenman). 14. Armjanskiy sel'skokhoz'yaystvennyy institut  
(for Vartanyan). 15. Permskiy politekhnicheskiy institut (for  
Novikov). 16. Chlen-korrespondent Akademii nauk SSSR, glavnyy  
redaktor zhurnala "Voprosy ekonomiki" (for Gatovskiy).  
(Economics--Study and teaching)

GOL'WERE, A.A.; VAGNER, I.V.; MAGARSHYI, A.G., red.

[Testing the fuel system of diesel engines] Metodika is-  
pytani toplyvnoi apparatury dizelei. Kiev, Izd-vo  
"Urozhai," 1964. 148 p. (MIRA 17:8)

AUTHORS: Dankova, N. M. and Nagornyy, A. G.

68-58-6-11/21

TITLE. Corrosion of Apparatus and Preventive Measures on the Joke Oven Gas Desulphurisation Plant by the Sodium Arsenate Method (Korroziya apparatury i mery bor'by s neyu v tsekhe mysh'yakovo-sodovoy seroochistki)

PERIODICAL: Koks i Khimiya, 1958, Nr 6, pp 44-48 (USSR)

ABSTRACT: An excessive corrosion of the gas purification plant necessitated a thorough investigation of the problem. This was carried out in two directions: 1) studies of the state of the apparatus and pipelines in order to discover parts which were attacked by corrosion and the nature of the damage; 2) observations of the state of specimens of materials and protective coatings submitted to the action of a corresponding media. On the basis of this work some measures to prevent corrosion were taken. In the paper the results of the work which was carried out are described in some detail. It was found that the degree of corrosion depends on the concentration of sulphur compounds in the gas and on the gas throughput.

Card 1/2 When the plant is overloaded in respect of the gas throughput, corrosion becomes so intensive that in a very short time the plant has to be stopped (as was the case in the Zhdanov Plant where the second part of the plant was not ready on time). The most intense corrosion was observed in stationary places where no stirring action

68-58-6-11/21

Corrosion of Apparatus and Preventive Measures on the Coke Oven Gas  
Desulphurisation Plant by the Sodium Arsenate Method

takes place, in the places of the highest concentration of hydrogen sulphide in the solution (bottom parts of scrubbers) and of electrically welded joints. When designing new plants the following preventive measures are recommended: a) protection coatings of the bottom part of the scrubbers and regenerators; b) electrically welded joints where possible should be made from both sides (outside and inside); c) parts of the plant submitted to the action of a corrosive solution (overflow pipes of spray coolers, air bubblers in regenerators, etc.) should be made from low alloy stainless steels; d) beams supporting hurdles should be made of larger dimensions so as to provide some reserve for corrosion; e) connecting pipes welded into the gas mains and into scrubbers should be made from thick walled tubes etc. The degree of stability of some types of special steels and coatings was established. There is one table.

Card 2/2

ASSOCIATION: Zhdanovskiy koksokhimicheskiy zavod (Zhdanov Coal-tar Chemical Plant,

1. Chemical plants--Corrosion
2. Gases--Purification
3. Corrosion--Countermeasures
4. Sodium arsenate--Applications
5. Sulfur compounds--Corrosive effects

NAGORNYY, A.G.

Redesigning of a "Moskva"-type slide-valve 500 mm in diameter.  
koks i khim. no.2:57-58 '60. (MIRA 13:5)

1. Giprogazoochistka.  
(Slide-valves)

KOVALYUSHKO, S.P.; BELYAKOV, M.I., red.; TOGOBITSKAYA, N.V.  
[Tobobits'ka, N.V.], red.; KOVALENKO, O.I., red.;  
DOBROVOL'SKIY, O.A.[Dobrovol's'kyi, O.A.], red.;  
NAGORNIY, A.G.[Nahorny, A.H.], red.; LEVITSKAYA, G.P.  
[Levyts'ka, H.P.], red.; CHEREVATSKIY, S.A.[Cherevats'kyi,  
S.A.], tekhn. red.

[Manual on production planning and organization on collective  
and state farms] Dovidnyk po planuvanniu i organizatsii vy-  
robnytstva v kolhospakh i radhospakh. Kyiv, Derzhsil'hosp-  
vydav URSS, 1963. 935 p. (MIRA 16:12)  
(Ukraine--Farm management--Handbooks, manuals, etc.)



NAGORNYY, A.I.; SOBOLEVA, Ye.D.

Changes occurring in the properties of natigorite upon heating.  
Ogneupery 18 no.2:81-88 F '53. (MIRA 11:10)

1. Institut ogneuperev i stroymaterialov KazAN.  
(Antigorite) (Refractory materials)

NAGORNYI, A.I.; KHOKHOL'KOVA, L.A.

Some ceramic properties of montmorillonite clays from the Pavlodar and Ural deposits. Izv.AN Kazakh. SSR Ser.gor.dela, met. i stroimat. no.2:18-29 '54. (MLRA 9:6)  
(Pavlodar Province--Montmorillonite)(Ural Mountain region--Montmorillonite).

NAGORNYY, A.I.; KHOKHOL'KOVA, L.A.; LOBANOVA, Ye.T.

Mineral wastes of the coal and chemical industries as raw material  
for bricks made by the autoclave method. Izv.AN Kazakh.SSR Ser.gor.  
met. i stroimat. no.2:123-128 '54. (MIRA 9:6)  
(Waste products) (Brickmaking)

NAGORNYY, A. I., and SOBOLEVA, YE. D.

"Problem of the Utilization of the Magnesium Silicate Rocks of Kazakhstan for Forsterite Refractories"

Izv. AN Kazakh SSR, No 126, Ser. Gorn. Dela, Metallurg., Stroy materialov, No 2, 40-47, 1954, (Kazakhstan resume)

The authors clarify under laboratory conditions the possibility of obtaining forsterite refractories made of serpentinites and magnesites from Kazakhstan. They present microscopic and thermographic investigations of ophiolites and magnesites. Heating of ophiolites (100-1400°C) leads to a sharp growth in mechanical strength and in shrinkage phenomena. (RZhGeol, No 6, 1954)

SO: Sum 492, 12 May 55

NAGORNYI, A.I.

The use of plastic clays from central Kazakhstan. Izv. AN Kazakh.  
SSR Ser.gor.dela, met. i stroimat. no.2:129-135 '54. (MLRA 9:6)  
(Kazakhstan--Clays)

NAGORNYI, A. I., KHOKHOL'KOVA, L. A., AND LOBANOVA, YE. T.

Mineral Wastes From the Coal and Chemical Industries as Raw Materials  
for the Production of Pressurized Building Materials

Describes the results of an investigation on the production of building materials from mineral wastes and lime wastes from the chemical industry. Steaming in an autoclave produced samples having a compression strength of 150-170 kg/cm<sup>2</sup>. (RZhKhim, No. 1, 1955) Izv. AN Kazakh SSR, No. 126, 1954, 123-128

SO: Sum. No. 744, 8 Dec 55 - Supplementary Survey of Soviet Scientific Abstracts (17)

*NAGORNYY, A.I.*

USSR/ Miscellaneous - Ceramics manufacture

Card 1/1 Pub. 123 - 7/16

Authors : ~~Nagornyy, A. I.~~; Frolov, V. E.; Lebedev, M. A.; Khokhol'kova, L. A.;  
and Mikhaylyants, O. A.

Title : Manufacture of ceramic sewer pipes from Lengersk infusible clay

Periodical : Vest. AN Kaz. SSR 12, 63-67, Dec 1954

Abstract : The possibility of manufacturing high-quality ceramic sewer pipes  
from infusible Lengersk clays are discussed. The technological  
process employed in the manufacture of refractory tubes is  
described. Two USSR references (1941 and 1952). Tables.

Institution : .....

Submitted : M. I. Goryaev, Active Member of Acad. of Sc. Kaz-SSR

NAGORNY, A. I.

U.S.S.R.

Use of mirabilite in autoclave. A. I. NAGORNY. *Zhur. Priklad. Khim.*, 27 (8) 1016-18 (1964).—Mixtures of 90% burned rock and 10% carbide lime with 0.25, 0.50, and 1.00% mirabilite were shaped into cylinders under 150 kg./cm.<sup>2</sup> and steamed for 8 hr. under a pressure of 8 atm. The rise and drop in pressure lasted 3 to 4 hr. Optimum crushing strength (216 kg./cm.<sup>2</sup>) was obtained with 0.50% mirabilite. Without mirabilite, crushing strength was 154 kg./cm.<sup>2</sup>. Shaping at 18° to 20° resulted in cracks; this was eliminated by shaping at 40° to 50°C. B.Z.K.



NAGORNY, A. I.

U S S R ,

951. Autoclaved products from calcined rocks and "carbide lime".—A. I. NAGORNY (Zh. prikl. Khim., Leningr., 27, 1121, 1954). Since the war the production of autoclaved building materials in the U.S.S.R. has greatly increased. This is attributed to a revision of the quality standards for the sand. Previously it was assumed that only pure sands, with less than 8% clay, could be used. Successful experiments were carried out on the use of burnt shale-tip material and "carbide lime" for these so-called autoclave products. The burnt shale contained (%):  $\text{SiO}_2$ , 46-58.2;  $\text{Fe}_2\text{O}_3$ , 5.1-8.6;  $\text{Al}_2\text{O}_3$ , 20.1-34.8;  $\text{CaO}$ , 4-4.2;  $\text{MgO}$ , 1.2-2.1;  $\text{SO}_3$ , 2.3-3.0. The "carbide lime" contained (%):  $\text{SiO}_2$ , 1.96;  $\text{Fe}_2\text{O}_3$ , 0.07;  $\text{Al}_2\text{O}_3$ , 1.34;  $\text{CaO}$ , 67.6;  $\text{MgO}$ , 0.12;  $\text{SO}_3$ , 0.5; loss-on-ignition, 24.9. Autoclaved bricks produced from these materials (90% of burnt shale and 10% of "carbide lime") had a crushing strength of 2,275 lb/sq.in., a transverse strength of 500 lb/sq.in., a water absorption of 16.1%, and a good frost resistance. (1 fig., 2 tables.)

NAGORNYI, A. I.

Some of the processes which take place during the firing and service of bricks from loess sandy loams. A. I.

Nagornyi and L. A. Khokhlovskaya. *Izvest. Akad. Nauk Kazakh. S.S.R., Ser. Gornaya Dola, Met. i Stroimaterial.* 1955; No. 6, 44-46 (in Russian).—In the process of heating the loams, during the decompos. of  $\text{CaCO}_3$ , the chemically active CaO combines with the contacting silicates, forming aluminates, ferrites, and silicates of Ca. During the action of water on this product, the Ca silicates and aluminates hydrate. Hydration of Ca aluminates proceeds rapidly—in several sec.; after this, the Ca aluminate decompos. in the presence of  $\text{CO}_2$  in the air as follows:  $\text{CaO} \cdot \text{Al}_2\text{O}_3 \cdot 3\text{H}_2\text{O} + \text{CO}_2 \rightarrow \text{CaCO}_3 + 2\text{Al}(\text{OH})_3 + (n-3)\text{H}_2\text{O}$ . There is thus a peculiar process of regeneration of Ca carbonate which is a component of loess sandy loams.

B. Z. Kamich

11/20/55

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NAGORNY, A. I.

450

Processes in lime-silicate mixtures during hydrothermal treatment. A. I. Nagorny, B. P. Parinbetov, and O. A. Mikhailyants. *Izvest. Akad. Nauk Kazan. S.S.R., Ser. Gornogo Dela, Met. i Stroimaterial.* 1955, No. 5, 50-7 (in Russian).—During the autoclave treatment of mixts. of burnt rock and carbide lime, there take place (a) the formation of calcium silicates hydrated to various degrees and close in compn. to minerals of type okenite and gyrolite and (b) the formation of calcium hydroaluminates. By means of thermographic, chem., and phys. methods of investigation it was established that finely ground feldspar, hornblende, and hematite (admixts. in silicate raw material) react actively under hydrothermal conditions with  $\text{Ca}(\text{OH})_2$  and facilitate the hardening of the autoclaved mixts.  
B. Z. Kamich

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RM 224

NAGORNYI, A.I.

Raw materials of Kazakhstan for making autoclave structural materials. A. I. Nagornyi and B. P. Pariubetov. *Izv. Akad. Nauk Kazakh. S.S.R., Ser. Geogr. Dela, Mat. i Stroimaterial.* 1955, No. 5, 71-83 (in Russian). Marshallite, sands, sandy loams, argillaceous soils, and clays from various regions of Kazakhstan are suitable for autoclaving. B. Z. Kamah.

Max

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NAGURNYY, A.I.

*Drying of ceramic shapes made from saline clays. O. M. Mamonov and A. I. Nagurnyy. Izvest. Akad. Nauk Kazakh. S.S.R., Ser. Gornogo Dela; Mater. i Stroimaterial., 1959, No. 6, pp. 143-51. —The chief cause of the low quality of shapes made from saline clays is the uneven distribution of the salts during the drying. Deformation (cracks) is observed chiefly during the period of modification changes of sodium sulfate, which occur at 31.6°C. Heating of the mixtures to this temperature facilitates the normal course of drying and its intensification. Semidry pressing eliminates the migration of salts to the surface of the shape.*

B.Z.K.

PM *Red*

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48

NAGORMYY, A.I.; MIKHAYLYANTS, O.A.

Effect of mirabilite on changes in the porosity of objects made of  
clay. Izv. AN Kazakh. SSR. Ser. gor. dela, met., strof i stroimat. no. 10:55-  
60 '56. (MLRA 10:1)

(Glauber's salt) (Pottery)

NAGORNYI, A.I.; BORISOV, A.M.

Foam silicate made from loess-type argillaceous soils. Trudy Inst.  
stroim. i stroimat. AN Kazakh SSR 1:28-41 '58. (MIRA 11:6)  
(Kazakhstan--Building materials) (Soil cement)

NAGORNYI, A.I.; BORISOV, A.M.

Microporite made of loess-like clayey soils of eastern Kazakhstan.  
Trudy Inst. stroi. i stroimat. AN Kazakh SSR 2:251-255 '59.  
(MIRA 12:10)

(Building materials)



- NAGORNIY, A.I.; KHUSNUTDINOV, Z.D.

Use of slags from the Balkhash copper works to obtain slag  
"wadding" and "pumice". Trudy Kazakh. fil. Asia no.2:115-  
124 '60. (MIRA 15:12)  
(Kazakhstan—Lightweight concrete)

NAGORNYI, A.I.; KHOKHOL'KOVA, L.A.

Cellular ceramics made of Chegan clay and Karaganda argillite.  
Trudy Kazakh. fil. ASia no.2:134-137 '60. (MIRA 15:2)  
(Kazakhstan—Ceramic materials)

NAGORNYY, A.I.; KHOZHOL'KOVA, L.A.

Phase displacement in loesslike clayey soils during the formation of ceramic materials. Stek.1 ker. 17 no.4:29-31  
Ap '60. (MIRA 13:8)

(Ceramic materials)

NAGORNIY, A.I., kand. tekhn. nauk; BOGOMIN, P.I., inzh.; KRYLOV, S.A., inzh.

First plant in Kazakhstan processing loess-type loam. Stroil. mat.  
10 no.10:35-36 C '64. (MIRA 18:2)

NAGORNYY, A.I., kand.tekhn.nauk; BRAGIN, B.A., inzh.; MARFONOV, Yu.A., inzh.;  
KULEMZIN, K.N., inzh.; BELOBORODOVA, S.C., inzh.

Effect of additives on the crystallization of molten metallurgical  
slags and rock materials, Stek. i ker. 22 no.3:9-11 Mr '65.

(MIRA 18:10)

1. Alma-Atinskiy gosudarstvennyy nauchno-issledovatel'skiy  
institut stroitel'nykh materialov.

NAGORNYY, A.I.; LUKASHIN, A.S.; KILIMIN, K.N.; SHCHERBA, A.A.;  
KORNIYENKO, B.B.; KORNIYENKO, B.B.

Manufacture of glazed pipes at a brick plant. Incl. 100.  
11 no. 7: 11 1965.

1. A 196-11. Only machine-made vats. Iskiy inst. 1. 1965. 11 no. 7: 11 1965.  
material. 1. 1965. 11 no. 7: 11 1965. 1. 1965. 11 no. 7: 11 1965.  
Kiliminy, 11 no. 7: 11 1965. 1. 1965. 11 no. 7: 11 1965.

L 22906-66. EWT(1)/EPF(a)-2/EWA(1) WW

ACC NR: AP6006858.

SOURCE CODE: UR/0181/66/008/002/0587/0588

AUTHOR: Nagornykh, L. G.

ORG: Udmurtsk State Pedagogical Institute, Izhevsk (Udmurtskiy gosudarstvennyy pedagogicheskiy institut)

56  
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B

TITLE: On the derivation of the <sup>21. 54. 58</sup>heat conduction equation of a crystal lattice at high temperatures by dimensional analysis

SOURCE: Fizika tverdogo tela, v. 8, no. 2, 1966, 587-598

TOPIC TAGS: heat equation, dimension analysis, crystal lattice, ionic crystal, phonon, thermal conduction

ABSTRACT: The author follows methods developed by P. W. Bridgmann (Dimensional Analysis, Yale University Press, 1931) and separates the quantities that are important for the propagation of heat by lattice waves. A simple model of a monovalent ionic crystal is used. A functional relation is postulated between the thermal conductivity of the crystal due to the phonons, the atomic mass, the temperature, the ion charge, and the crystal lattice constant, by means of the II theorem

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Card 1/2

L 22906-66

ACC NR: AP6006858

of dimensional analysis, in the form  $\Pi = \kappa_G M^\alpha e^\beta a^\gamma T^\delta$ , and it is shown, as being power-law dependence of the thermal conductivity on the quantities in the argument, that

$$\kappa_G = \text{const} \frac{k^3}{ua^3 Ma^3 T}$$

where

$$u = c_1 e M^{-0.5} a^{-0.5},$$

and

$$\alpha = c_2 a k e^{-1}.$$

The author thanks A. I. Ansel'm whose book (Vvedeniye v teoriyu poluprovodnikov [Introduction into Theory of Semiconductors], Fizmatgiz, 1962) suggested this article. Orig. art. has: 3 formulas.

SUB CODE: 20/ SUBM DATE: 17May65/ ORIG REF: 006/

Card 2/2 ~~BLC~~



KHILENKO, Vasilii Iosifovich; NAGORNYI, Anatoliy Onufriyevich;  
VASHCHENKO, Nikolay Mikhaylovich, TEMCHENKO, M.A., red.

[Pulse techniques] Impul'snaya tekhnika. Kiev, Izd-vo  
Kievskogo univ., 1964. 167 p. (PIRA 17:12)

*deceased*  
NAGORNYI, Aleksandr Vasil'yevich, prof. [deceased]; NIKITIN, V.N.; BULANKIN, Ivan Nikolayevich [deceased]; SIROTININ, N.N., prof.; MAKHIN'KO, V.I., dots.; PARINA, Ye.V., dots.; POLEZHAYEV, Ye.F., red.; LYUDKOVSKAYA, N.I., tekhn. red.

[Problems of aging and longevity] Problema starenia i doigoletia. Moskva, Medgiz, 1963. 754 p. (MIRA 16:11)

1. Chlen-korrespondent AN Ukr.SSR (for Nagorny). 2. Akademiya nauk Ukr. SSR (for Bulankin). 3. Deystvitel'nyy chlen AMN SSSR (for Sirotinin).  
(AGING) (LONGEVITY)

NAGORNYI, A.Ya.; LAUSHEIN, N.P.

Complete processing of potatoes to starch and ethyl alcohol.  
Spir. prom. 26 no. 6:30-34 '60. (MIRA 13:11)  
(Potatoes) (Starch) (Ethyl alcohol)

~~NAGORNYY~~, B.A.; YEROFEEV, I.A., red.; FEDOTOVA, A.F., tekhn. red.;  
PONOMAREVA, A.A., tekhn. red.

[Interesting questions in geography, manual for extra-curricular  
work] Zanimatel'nye voprosy po geografii; posobie dlia vneklassnoi  
raboty. Moskva, Gos. uchebno-pedagog. izd-vo M-va prosv. RSFSR,  
1958. 149 p. (MIRA 11:10)

(Geography--Examinations, questions, etc.)

1ST AND 2ND EDITION		PROCESSING AND PROPERTIES INDEX		3RD AND 4TH EDITION	
<p><b>NAGORNYY, G. I.</b></p> <p>CP</p>		<p>Polytherm of the reciprocal system of magnesium and potassium chlorides and nitrates (the conversion of magnesium chloride). A. G. Nerganen and G. I. Nagornyy. <i>Bull. acad. sci. U. R. S. S., Chem. nat. sci., Ser. chim.</i> 1936, No. 1, 217-28 (in English 228).—The polytherm of diagonal section of the system <math>KNO_3-MgCl_2-H_2O</math> was investigated at from <math>-33.2^\circ</math> to <math>30^\circ</math>. Below <math>-33.2^\circ</math>, the diagram of state represents a simple ternary system with the eutectic point at <math>-33.2^\circ</math>. Above <math>-33.2^\circ</math>, the crystal field of the interchange product <math>KCl</math>, appeared. The interchange reaction proceeded only in the direction of the stable components: <math>KNO_3</math> and <math>MgCl_2</math>, reaching a max. conversion at <math>-33.2^\circ</math> with the yield of 96% of <math>KNO_3</math>. The conversion of <math>Mg(NO_3)_2</math> in comparison with that of <math>NH_4NO_3</math> or <math>Ca(NO_3)_2</math>, yielded the largest amt. of <math>KNO_3</math>. Tables, diagrams and a discussion are given. Seven references.</p> <p>A. A. Podgorny</p>		<p>COMMON VARIETY INDEX</p>	
<p>438-556 METALLURGICAL LITERATURE CLASSIFICATION</p>		<p>1ST AND 2ND EDITION</p>		<p>3RD AND 4TH EDITION</p>	
<p>1ST AND 2ND EDITION</p>		<p>3RD AND 4TH EDITION</p>		<p>1ST AND 2ND EDITION</p>	

NAGORNYY, G. I.

Mbr., Inst. General and Inorganic Chemistry Im. N. S. Kurnakov, Dept.  
Chem. Sci., Acad. Sci., -1943-.

"On the Solubility and the Reaction of Acid Anhydrides in Systems with  
Metal Halides", Iz. Ak. Nauk SSSR, Otdel. Tekh. Nauk, No. 5, 1943.

Inst. General Inorg. Chem., Acad. -1943-.

NAGORNYY, G.I.

Nonreciprocal reciprocal system of sodium and barium  
chlorides and oxides. G.I. Nagornyy and I. D. Zimin,  
Izv. Akad. Nauk SSSR, Khim. 1964, No. 1, 31-40 (1964); Zhur., Khim. 1964, No.  
46117. The system Na, BaCl<sub>2</sub>, BaO was studied visually  
and polythermally. The liquidus area of the system was  
formed by 4 cryst. fields of the components. The con-  
ventional thermal effect of the exchange reaction was at  
variance with the direction of the exchange reaction. The  
system was nonreciprocal and reciprocal; formed no com-  
pounds, and no solid solns. M. Hosh

(1)

PM

BELYAYEVA, V.A.; DRITS, V.A.; ZAKHVALINSKIY, M.N.; LARINA, V.A.; NAGORNAYA,  
Ye.F.; NIKULINA, S.Ye.; NAGORNYI, G.I.; SEMIUSOVA, T.N.

Characteristics of clays of the Troshkovskiy deposits of the  
Irkutsk Province. Izv. Fiz.-khim. nauch.-issl. inst. Irk. un.  
5 no.1:252-289 '61. (MIRA 16:8)

(Irkutsk Province—Clay—Analysis)



ZIMINA, T.D.; BERGMAN, A.G.; NAGORNYI, G.I.

Reciprocal system consisting of chlorides and sulfates of sodium,  
calcium, and barium. Zhur. neorg. khim. 10 no.9:2145-2151 3 '65.  
(MIRA 18:10)

1. Irkutskiy gosudarstvennyy universitet i Rostovskiy-na-Donu institut  
sel'skokhozyaystvennogo mashinostroyeniya.

BELYAYEVA, V.A.; ZAKHVALINSKIY, M.N.; ZIMINA, T.D.; DEMINA, T.N.;  
KALASHNIKOV, P.V.; NAGORNAYA, Ye.F.; NAGORNIY, G.I.; PITOVA, L.I.

Adsorption properties of Gysyl' argillites. Izv. VNIIG  
Ser.khim. no.7:18-25 '65.

(MIRA 18:12)

FINKEL'SHTEYN, N.A.; BERGMAN, A.G.; NADAROV, S.I.

Interaction between potassium, calcium, and barium chlorides.  
Zhur.neorg.khim. 10 no.8.1890-1894. Apr 1965.

Interaction between fused chlorides and sulfates of potassium,  
calcium, and barium. Ibid. 1895-1900.

1. Intensity considerations in the study of the interaction of  
fluorine with alkali metal chlorides. Zhur.neorg.khim. 10 no.8.1895-1899.  
July 1, 1964.

ZIMINA, T.D.; KOLMAN, A.G.; NAGORNYY, A.V.

Diagrams sections of the quaternary relict ...  
of sodium, calcium, and barium in ...  
zhur. 31 no.10.1045-1049 1965.

1. Irkutskiy gosudarstvennyy universitet ...  
institut sel'skokhozyaystvennogo mashinostroyeniya, Irkutsk  
May 1965.

NAGORNYI, G.K.; KHOLOPSEV, V.P.; KAPLINA, Ye.G.

Operation of the dephenolizing installation at the Moscow Coke-Oven  
Gas Plant. Koks i khim. no.2:44-48 '55. (MLRA 9:3)

1. Moskovskiy koksogazovyy zavod.  
(Moscow--Phenols)

NAGORNY, G.K.

SOV/68-59-5-13/25

AUTHORS: Kaplina, Ye.G., Kolodyazhnyy, I.V. and Nagornyy, G.K.

TITLE: Experience in the Operation of an Ammonia-Lime Plant with an External Reactor (Opyt raboty ammiachno-izvestkovogo otdeleniya s vynosnym reaktorom)

PERIODICAL: Koks i khimiya, 1959, Nr 5, pp 34-38 (USSR)

ABSTRACT: Difficulties encountered in operating the ammonia-lime plant with an external reactor and settling tank and their solution are described. The main difficulty was the precipitation of calcium sulphate in the second distillation column. To prevent this the temperature in the reactor and settling tank was increased (by 2-3 °C above the temperature in the column) by increasing the pressure under which they were operating. In addition the outlet of the mixture of liquor and lime from the reactor into the settling tank was made from the upper part of the reactor (Fig 4) which maintained a constant level of the mixture in the reactor and secured a

Card 1/2

SOV/68-59-5-13/25

Experience in the Operation of an Ammonia-Lime Plant with an  
External Reactor

higher degree of decomposition of combined ammonia salts.  
There are 4 figures and 1 table.

ASSOCIATION: Moskovskiy Koksogazovyy zavod (Moscow Coke-Gas Works)

Card 2/2

NAGORNYY, I. S., Ass't.

Kiev Veterinary Inst.

"Enterocentesis in colics in horses." (Preliminary report)

SO: Veterinariia 24(6), 1947, p. 16.



NAGORNYI, I.S. Asst Professor (Kiev Vet Inst)

"Application of Tissue Therapy in Complex with Other Means of Treating  
Diseases of the Genital Apparatus of Agricultural Animals"

Report given at 13th Inter-VUZ (Higher Educational Insts.) Scientific-Industrial  
Conference, held February 1956 at Kiev Vet Inst.

NAGORNYI, Ivan Sergeyevich [Nahorny, I.S.]; PRIMAK, Aleksey  
Yakovlevich [Prymak, O.IA.]; ANDREYEVSKIY, V.Ya.  
[Andrievs'kyl, V.IA.], dots., red.; DOBRZHANSKIY, V.M.,  
[Dobrzhans'kyl, V.M.], red.; POTOTSKAYA, L.A. [Potots'ka,  
L.A.], tekhn. red.

[Udder diseases in cows] Khvoroby vym'ia u koriv. Kyiv,  
Derzhsil'hospvydav URSR, 1962. 90 p. (MIRA 16:5)  
(Udder--Diseases)

NAGORNYI, L.I., inzh.; SKRIPNIK, I.T., inzh.

Methods of computing and designing the cross section of shaped  
wires for locked-coil wire rope construction. Stal' 25  
no.10:964-965 O '65. (MIRA 18:11)

1. Khartsyzskiy staleprovolochno-kanatnyy zavod.

CHERVETSOV, V.V.; NAGORNYI, L.Ya.

Multichannel telemetering system with temporary separation of channels equipped with semiconductor devices. Izv. vys. ucheb. zav.; radiotekh. no.3:294-300 My-Je '58. (MIRA 11:7)

1.Rekomendovana kafedroy teoreticheskoy radio tekhniki L'vovskogo politekhnicheskogo instituta.  
(Prospecting--Geophysical methods) (Telemetering) (Transistors)

SOV/142-58--1/30

AUTHOR: Nagorriy, L.Ya.

TITLE: Analysis of the Parameters of Transistory Triode Stage by the Conformal Conversion Method (Analiz parametrov kaskada na poluprovodnikovom triode metodom konformnykh preobrazovaniy)

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy - radiotekhnika, 1958, Nr 4, pp 402-410 (USSR)

ABSTRACT: The paper describes a conformal conversion method for the analysis of a high-frequency amplifier with junction transistors in a case where the characteristic parameters of the transistor, the load resistance and the signal source appear as complex values. A junction transistor can be considered where signals are small, as a linear four pole, which is described by a system of 2 equations, connecting the input and output currents and voltages. Such a four pole can be described by 18 equation systems. Knowing one equation system, the other parameters of an equivalent four pole

Card 1/4

SOV/142-58-4-5/30

Analysis of the Parameters of Transistor Triode Stage by the  
Conformal Conversion Method

can be easily ascertained. On the basis of the characteristic parameters of the transistor, measured over broad frequency range, and of general four pole theory, the transistor stage can be analytically calculated or experimentally analyzed. The author examines the average case when all transistor parameters, the load resistance and the signal source resistance, represent complex values. The transistor amplifier stage is represented as a four pole. When analyzing the amplifier stage, a graphic method is used, based on conformal conversion with the help of a fractional function, derived from the stage's basic parameters. This graphic delineation gives the following results: 1) With a resistance load varying from 0 to  $\infty$  the input and output resistances of the stage have a capacitive nature. 2) When the load resistance or signal source resistance have a purely inductive character (at a frequency of 0.2 Mc), in a specific range of values, the active components of the input and output resistances are negative

Card 2/4

SOV/141 58-4-3/30

Analysis of the Parameters of Transistors Triode Stage by the  
Conformal Conversion Method

for the load resistance and the signal source resistance. This produces unstable operation in the stage under certain conditions. 3/ The stage works in a stable fashion, where there is a purely capacitive load. The input and output resistances have a capacitive character. 4/ With the help of nomographs, the characteristic resistances of the stage's input and output can be determined. The nomographs are calculated for a frequency of 0.2 Mc. The author gives nomographs for the variation of the input resistance of the stage, of the frequency and the load resistance, and of the amplification ratio with the cascade voltage  $-120V$ . Formulae must be used from the general four pole theory, to investigate the amplifier stage parameter with transistors. These formulae can be expressed by any characteristic parameters of the transistor, according to which are known. Then it is relatively easy to form nomographs by using the conformal conversion method. Analysis and calculation

Card 3/4

SOV/141-58-4-3/30

Analysis of the Parameters of Transistery Triode Stage by the  
Conformal Conversion Method

are much easier to carry out with the help of these  
nomographs than by the use of analytical methods.  
There are 6 graphs, 1 circuit diagram, 1 table and 1  
references, 3 of which are Soviet, 1 English and 1  
French.

ASSOCIATION: Kafedra radiopriyemnykh ustroystv L'vovskogo politek-  
nicheskogo instituta (Chair of radio reception  
Equipment, L'vov Polytechnical Institute.

SUBMITTED: December 18, 1957 (initially)  
and January 24, 1958 (after revision)

Card 4/4



NAGORNYI, L.Ya.; RAKOV, M.A.

Layout for obtaining large time delays in transistor circuits.  
Avtom.kont.i izm.tekh. no.4:121-123 '60. (MIRA 13:8)  
(Transistor circuits) (Pulse techniques (Electronics))

9.2560(1624,1154,1161)

AUTHORS:

TITLE:

SOURCE:

TEXT:

31158  
S/651/61/000/005/001 '009  
D209/D305

L.Ya. Nagornyy, and M.A. Rakov

Synthesis of internal feedback neutralization networks in transistor circuits

Akademiya nauk Ukrayins'koyi RSR. Instytut mashynoznavstva i avtomatyky, L'viv. Avtomaticheskyy kontrol' i izmeritel'naya tekhnika. no. 5, Kiev, 1961, 55 - 63

It is possible to show that the connection of suitable external circuits to an active non-unidirectional element (e.g. a transistor) can neutralize the effects of internal feedback in this element. A circuit with unwanted internal feedback can be represented in the form of a four-terminal network a,b,c,d (Fig. 1) with the base terminal O inside it, having a load  $Y_1$ . Equations for  $U_1$  and  $U_2$  are given and a condition for feedback neutralization found. Using this condition and the known frequency response characteristics of transistors and other circuit elements, frequency response characteristics of equivalent two-terminal neu-

Card 1/4

Synthesis of internal ...

31458  
S/651/61/000/005/001/009  
D209/D305

tralizing networks are calculated. A method of determining approximate imittance of any two-terminal network element is given. As an example of constructive network synthesis, neutralization of the internal feedback of a two-stage transistor amplifier (Fig. 2) is examined. It is assumed that the characteristic conductances of both transistors are known. Indeterminate matrices of the conductances are given for both transistors. The determinate matrix of conductance is obtained directly from Fig. (2) and the total algebraic addition is found. The operation with algebraic addition renders it possible to choose the quantity, connection points and to determine the character of frequency relationships of separate neutralizing networks. Finally, analyzing the algebraic addition an expression is obtained which becomes equal to zero under certain conditions. Fig. (3) depicts one of the methods of internal feedback neutralization. Here the feedback in the first transistor is neutralized by means of a bridge circuit. The negative feedback in the second transistor is neutralized by means of a transformer and a conductance  $Y_{k2}$ . In this way the amplifier is converted into a unidirectional device. The above method of constructive synthesis can be applied to circuits with thermionic val-

Card 2/4

Synthesis of internal ...

S/651/61/000/005/001/009  
D209/D305

ves working on VHF and to problems in electronic circuits operating in linear ranges. There are 3 figures and 18 references: 12 Soviet-bloc and 6 non-Soviet-bloc. The 4 most recent references to the English-language publications read as follows: A.D. Stern, C.A. Aldridge, A.W. Chow Internal feedback and neutralization of transistor amplifiers. Proc. IRE, v. 43, no. 7, 1955; G.Y. Chu, Unilateralization of junction-transistor amplifiers at high frequencies Proc. IRE, v. 43, no. 8, 1955; D.F. Tuttle Network synthesis, V.I.N.Y., Wiley, 1958. E.A. Guillemin, Synthesis of passive networks N.Y. Wiley, 1957

SUBMITTED: October 20, 1960

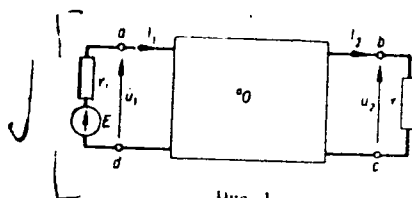


Fig. 1.

Card 3/4

NAGORNYY, L. Ya.

Dependence of the principal circuit parameters on the changes in  
the parameters of one of its elements. Elektrosviaz' 15  
no.6:42-52 Je '61. (MIRA 14:6)  
(Electric networks)  
(Transistor amplifiers)

PECHUK, V. I., kand. tekhn. nauk; NAGORNYI, L. Ya. [Nahorny, L. IA.];  
TARATUKHINA, G. P. [Taratukhina, H. P.]; PRADED-SADOVSKIY, D. D.  
[Pradied-Sadovs'kyi, D. D.]

Tensometric measurement of pressure. Khim. prom. [Ukr.] no. 1:  
47-52 Ja-Mr '62. (MIRA 15:10)

1. Institut avtomatiki Gosplana UkrSSR.

(Strain guages)

S/106/62/000/002/006/010  
A055/A101

9,3230  
AUTHOR:

Nagornyy, L. Ya.

TITLE:

Relative variation of the fundamental parameters of networks due to the variation of  $n$  parameters in their component elements

PERIODICAL:

Elektrosvyaz', no. 2, 1962, 36 - 44

TEXT:

The author deduces approximate formulae giving the relative variation of the fundamental parameters of transistorized or electron tube networks (for instance, the input or output admittance) when this variation is determined by the variation of  $n$  (i.e. more than one) parameters included in the elements composing these networks. Assuming that the determinant of the matrix of the examined network is known, the author represents the network as a four-pole and using the matrix determinant, he derives the formulae for the relative variation of the network's fundamental parameters. These formulae are expressed, in a general form, through the matrix determinant, its algebraic "complements" and the increments of the network's parameters, these parameters being resistance of a two-terminal element, characteristic admittance of a transistor, etc. Formulae are obtained for the relative variation of the input admittance, the output ad-

Card 1/2

NAGORNYI, L.Ya., kand.tekhn.nauk; TOPOLEV, V.P.

Noncontact standard alternating voltage switch for weighing devices. Avtom.i prib. no.3:66-68 J1-S '62. (MIRA 16:2)

1. Institut avtomatiki Gosplana UkrSSR.  
(Electric switchgear)



NAGORNYI, L.Ya.; TOPOLEV, V.P.

Noncontact electronic a.c. switch. Izv.tekh. no.12:43-46  
D '62. (Electronic instruments) (MIRA 15:12)

NAGORNIY, L.Ya.

Contribution to the theory of amplifiers with multichannel  
feedback. Izv. vys. ucheb. zav.; radiotekh. 5 no.4:506-514  
Jl-Ag '62. (MIRA 16:6)

1. Rekomendovana Institutom avtomatiki UkrSSR.  
(Amplifiers(Electronics))

NAGORNYY, L.Ya.

Relative changes of the main parameters of networks with variation  
of n parameters of their elements. Elektrosviaz' 16 no.2:36-44  
F 162. (MIRA 15:2)

(Electric networks)

3375  
S/103/62/023/001/009/012  
D201/D304

9,3240(1040,1139,1154)

AUTHORS: Il'nitskiy, L.Ya., and Nagornyy, L.Ya. (Kiyev)

TITLE: A capacitive feedback differentiating amplifier

PERIODICAL: Avtomatika i telemekhanika, v. 23, no. 1, 1962, 91-97

TEXT: By using the generalized method of nodal voltage analysis the authors analyze the differentiating amplifier with capacitive feedback, as shown in Fig. 1. The four-pole  $A$ , with shorted lower terminals, is the amplifier of the differentiator,  $Y_1$  - the internal admittance of the differentiated voltage source  $e(t)$ ,  $C_1$  - the differentiating capacitance and  $C_2$  - the feedback capacitance. The analysis is made under the following idealizing assumptions: The amplifier does not introduce non-linear or frequency distortions, the input impedance of the amplifier is infinite, the output impedance is zero; the gain is independent of frequency, the frequency and amplitude responses are linear and that of the internal source resistance is zero. It is shown that the theoretical analysis of the amplifier makes it possible to determine its basic parameters.

Card 1/3

A capacitive feedback differentiating...

33775  
S/103/62/023/001/009/014  
D201/D304

such as sensitivity and the differentiation time constant. These parameters are introduced into the calculation formulae as the respective algebraic complements and determinants of the conductivity matrix. Any changes thus introduced into the amplifier circuit do not result in additional complication of the calculations. A most suitable circuit may thus be chosen for a given performance and the synthesis of differentiating arrangements can thus be easily made. The analysis shows that owing to the instability of the circuit, no ideal differentiation is possible. If the Routh-Hurwitz stability criterion has to be satisfied, no exact differentiation is possible. If a stability factor determined from the required accuracy, with which the derivatives have to be evaluated, is introduced, the performance is ipso facto impaired. The analysis is illustrated by the design of a two stage differentiating amplifier which shows that the sensitivity of such an arrangement with negative feedback is about 66 times greater than that without feedback. There are 2 figures, and 7 references: 6 Soviet-bloc and 1 non-Soviet-bloc

SUBMITTED: March 24, 1961

Card 2/3

NAGORNYI, Leonid Yakovlevich, kand. tekhn. nauk; TROKHIMENKO, Ya.K.,  
kand. tekhn. nauk, retsenzent; POLYANSKAYA, L.O., inzh.,  
red.izd-va; SHAFETA, S.M., tekhn. red.

[Analysis and design of amplifier networks] Analiz i raschet  
usilitel'nykh skhem. Kiev, Gostekhzdat USSR, 1963. 243 p.  
(MIRA 15:5)  
(Amplifiers (Electronics)) (Electronic circuits)

NAGORNYI, L.Ya.; PECHUK, V.I.; SKRIPCHUK, V.Yu.; TOPOLEV, V.P.

Methods for reducing the dynamic error of tensometric scales.  
Izm. tekhn. no.12:15-17 D '63.  
(MIRA 16:12)

NAGORNYI, L.Ya.

Relative instability of the principal parameters of an amplifier.  
Izv. vys. ucheb. zav.; radiotekh. 6 no.5:514-523 S-O '63.  
(MIRA 17:1)

1. Rekomendovana Institutom avtomatiki Gosplana UkrSSR.



NAGORNYI, L.Ya. (Kiyev)

Change of transfer coefficients according to the voltage and current  
of a four-terminal network with variation of two parameters of  
circuit elements. Radiotekhnika i elektronika, 24 no.10:1365-1372 O '63.  
(MIRA 16:11)

NAGORNYY, L.Ya., kand.tekhn.nauk; SIN'KOV, M.V., inzh.

Computer system for determining the optimum order of operation of  
units in an electric power system. Energ. i elektrotekh. prom.  
no.4:9-12 O-D '64.  
(MIRA 18:3)

L 42456-65 EED-2/EIT(d)/EWP(1) Pg-4/Pk-4/Pq-4 IJP(c) GG/BB  
ACCESSION NR: AP5006641. S/0146/65/008/001/0096/0104

AUTHOR: Nagornyy, L. Ya.; Il'nitskiy, L. Ya.

TITLE: Generalized parameter differentiators and integrators 16✓

SOURCE: IVUZ. Priborostroyeniye, v. 8, no. 1, 1965, 96-104

TOPIC TAGS: differentiator, integrator

ABSTRACT: The sensitivity, time constant, structural error, and performance factor of a differentiator or an integrator are regarded as its fundamental parameters. The performance factor Q shows how many times the output voltage of a differentiator is higher than the output voltage of a simplest (CR or RL) differential circuit under identical conditions. The generalized method of nodal voltages is used to develop formulas for the above parameters. Only the admittance matrix and the circuit nodes across which the functional element is connected need be known. The resulting fundamental-parameter formulas

Card 1/2

L 42456-65

ACCESSION NR: AP5006641

expressed in terms of the functional reactive element, a determinant, and its signed minors are rather general and can be used in practice for electron-tube or semiconductor circuits of any configuration. Orig. art. has: 3 figures and 29 formulas.

ASSOCIATION: Kiyevskiy institut grazhdanskogo vozdušnogo flota (Kiev Civil Aviation Institute)

SUBMITTED: 13Nov63

ENCL: 00

SUB CODE: EC

NO REF SOV: 005

OTHER: 000

Card 2/2 CC

LYASHCHINSKIY, B.I.; KOROMARENKO, Ye.P.; SERDYUK, V.F.; SAVCHENKO, I.P.

Automation of technological processes in the production of electric drives.  
Mashinostroitel' no.8:10-11 Ag '64. (MIRA 17:10)

NAGORNYI, M.T., prof.; MAGDIYEV, T.Sh., kand. med. nauk

Errors and hazards in biliary tract surgery. Khirurgiya 89 no.11:  
9-15 N '63. MIRA 17:11

1. Iz kafedry gosspital'noy khirurgii (zav. - prof. M.T. Nagorny):  
Dagestanskogo meditsinskogo instituta.

NAGORNYI, M.V. [Nahorny, M.V.], inzh.-mekhanik

Attachment to USIN-1 stands for testing fuel pumps of DT-24  
and 22 T-28 tractors. Mekh.sil'.hosp. 11 no.2:22 P '60.  
(MIRA 13:6)

(Fuel pumps--Testing)

NAGORNYY, M.V. [Nahorny1, M.V.], inzh.

Controlling and testing the centrifuge of T-28 tractors. Mekh. sil'.  
hosp. 11 no.12:15-16 D '60. (MIRA 13:12)

(Tractors--~~L~~ubrication)



NAGORNYI, N.A., gornyy inzhener

Extracting clay in winter conditions with the aid of rotor  
excavators. Gor.zhur. no.5:44-47 My '55. (MLRA 8:7)  
(Excavating machinery)

NAGORNYĬ, N. I. (Veterinary Surgeon, Ulyanovsk Raion, Kirovograd Oblast')

The use of milk and penicillin in stachybotriotoxicosis of horses"

Veterinariya, Vol. 38, no. 10, October 1961, pp. 81-86

USSR/Mathematics - Algorithm Theory

21 May 53

"Strengthening the Theorem of Reduction (Adduction) in the Theory of Algorithms,"

N. M. Nagorny

DAN SSSR, Vol 90, No 3, pp 341-342

Strengthens the theorem <sup>9</sup> given by A. A. Markov (Trudy Matemat In-ta imeni Steklova, 38 (1951)) as a consequence of the theorem on algorithm reduction, <sup>This theorem</sup> that each normal algorithm over alphabet A is equivalent relative to A to a certain normal algorithm in the alphabet A cup (a,b), where a and b are letters not belonging in A. ~~which~~ <sup>The</sup> The theorem permits one to reduce any normal algorithm over alphabet A to an equivalent, relative to A, normal algorithm in a <sup>2-</sup> ~~two~~-letter expansion of alphabet A. Acknowledges attention of Prof A. A. Markov. Presented by Acad V. I. Smirnov 18 Mar 53.

15

NAGORNY N. M.

16(1)

PHASE I BOOK EXPLOITATION

SOV/1707

Akademiya nauk SSSR. Matematicheskii institut

Problemy konstruktivnogo napravleniya v matematike; sbornik rabot, vyp. 1 (Problems Connected With the Construction Trend in Mathematics; Collection of Articles, Nr 1) Moscow, Izd-vo AN SSSR, 1958. 348 p. (Series: Its: Trudy, t. 52). 2,500 copies printed.

Ed.: N.A. Shanin; Resp. Ed.: I.G. Petrovskiy, Academician; Deputy Resp. Ed.: S.M. Nikol'skiy, Professor; Tech. Ed.: R.A. Arons.

PURPOSE: This book is intended for mathematicians.

COVERAGE: The book is a collection of works presented at the seminar on mathematical logic of the Leningrad Branch of the Matematicheskii institut imeni V.A. Steklova (Mathematical Institute imeni V.A. Steklov) of the Academy of Sciences, USSR. The articles deal primarily with problems connected with the constructive trend in mathematics. A detailed study is made of the theory of algorithms and constructive mathematical logic. The book is divided into

Card 1/5

Problems Connected With the Construction (Cont.)

SOV/1707

three main parts: I. The General Theory of Algorithms and Its Application to the Theory of Associative Calculations. II. Constructive Mathematical Logic. III. Constructive Mathematical Analysis.

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PART I. THE GENERAL THEORY OF ALGORITHMS AND ITS APPLICATION TO THE THEORY OF ASSOCIATIVE CALCULATIONS

Nagorny, N.M. Certain Generalized Concepts of a Normal Algorithm 7

Introduction 1. Definition of  $\epsilon$ -type algorithms 2. Closure of  $\epsilon$ -type algorithms 3.  $\epsilon$ -type algorithms and normal algorithms 4.  $\epsilon$ -type algorithms and normal algorithms (continuation) 5. Canonical  $\epsilon$ -type algorithms 6. Composition of  $\epsilon$ -type algorithms 7. Branching of  $\epsilon$ -type algorithms 8. Recursion of  $\epsilon$ -type algorithms 9.  $\epsilon$ -type algorithms 10.  $\epsilon$ -type algorithms. References

Nagorny, N.M. On the Minimum Alphabet of Algorithms Over a Given Alphabet

66

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Problems Connected With the Construction (Cont.)

SOV/1707

Detlovs, V.K. The Equivalence of Normal Algorithms and Recursive Functions

75

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Orlovskiy, E.S. Certain Problems of the Theory of Algorithms

140

Introduction I. Construction of normal algorithms inverse to a given algorithm 1. Formulation of provable theorems 2. Construction of unknown algorithms 3. Proof of theorem 2 II. Construction of a universal algorithm system 4. A universal algorithm system 5. Fundamental lemmas 6. Proof of fundamental lemmas. References

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1. Constructive mathematical objects 2. Historical information. Critique of S.C. Kleene's theory 3. Fundamental logicomathematical languages 4. Algorithms of the behavior of a constructive problem 5. An algorithm for deciphering elementary formulas 6. On the meaning of supporting formulas 7. Some information from the constructive theory of sets 8. Certain extensions of fundamental logicomathematical languages	

Card 4/5

Problems Connected With the Construction (Cont.)

SOV/1707

PART III. CONSTRUCTIVE MATHEMATICAL ANALYSIS

Markov, A.A. On Constructive Functions

315

Introduction 1. Recursive functions with rational values  
2. Regularly converging sequences 3. Constructive real  
numbers 4. Constructive sequences of real numbers 5. Con-  
structive functions of a real variable. References

AVAILABLE: Library of Congress

Card 5/5

LK/ad  
6-15-59



NAGORNYI, H.M.

Some generalizations of the concept of a normal algorithm. Trudy  
Mat. inst. 52:7-65 '58. (IRA 11:7)  
(Algorism)

NAGORNYI, H.M.

Minimal alphabet of algorithms over a given alphabet. Trudy Mat. inst.  
52:66-74 '58. (MIRA 11:7)

(Algorism)

MAGARIK, V.A.; NAGORNIY, N.M., otv. red.; YAKOVKIN, M.V., red.; POPOVA,  
N.S., tekhn. red.

[Standard programs for the BESM-2 digital computer of the  
Computer Center of the Academy of Sciences of the U.S.S.R.]  
Standartnye programmy BESM-2 vychislitel'nogo tsentra AN SSSR.  
Moskva, Vychislitel'nyi tsentr AN SSSR. No. 2. 1960. 33 p.

(MIRA 14:8)

(Electronic digital computers) (Programming (Electronic computers))

ZAK, L.A.; CHIBISOV, V.V.; NAGORNYI, N.M., otv. red.; ORLOVA, I.A.,  
red.; KORKINA, A.I., tekhn. red.

[Test programs for the BESM-2 computer] Testovye programmy dlia  
mashiny BESM-2. Moskva, Vychislitel'ny tsentr AN SSSR, 1961.  
24 p. (MIRA 14:8)

(Electronic digital computers--Testing)

NAGORNYI, N

M

Sistema komand universal'noy tsifrovoy avtomaticheskoy  
mashiny BESM-2 Vychislitel'nogo Tsentra AN SSSR (by)  
V.A. Magarik (i) N.M. Nagornyy. Moskva, Vychislitel'nyy  
Tsentr AN SSSR, 1960.  
83 p. diagrs.

PHASE I BOOK EXPLOITATION

SOV/5880

Magarik, V. A., and N. M. Nagornyy

Sistema komand universal'noy tsifrovoy avtomaticheskoy mashiny  
BESM-2 Vychislitel'nogo tsentra AN SSSR (Instruction System for  
the BESM-2 Universal Digital Computer) 2d ed., rev. Moscow,  
Vychislitel'nyy tsentr AN SSSR, 1961. 88 p. 3000 copies printed.

Sponsoring Agency: Akademiya nauk SSSR. Vychislitel'nyy tsentr.

Resp. Ed.: V. M. Kurochikin, Candidate of Physics and Mathematics;  
Ed.: I. A. Orlova; Tech. Ed.: A. I. Korkina.

PURPOSE: This book is primarily intended for personnel of scientific  
and industrial organizations which use computers. It may also  
prove useful for training programmers.

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Instruction System (Cont.)

SOV/5890

COVERAGE: The book describes the control and instruction system for the BESM-2 universal digital automatic computer of the Computation Center, Academy of Sciences USSR. The modifications of this system which were recommended by the BESM-2 conferences held in Riga and Leningrad have been incorporated into the second edition. No personalities are mentioned. There are no references.

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S/044/62/000/012/047/049

A066/A066

AUTHORS: Kozhukhin, G.I., Nagornyy, N.M., Pottosin, I.V.

TITLE: Principles of organization and utilization of a program library

PERIODICAL: Referativnyy zhurnal, Matematika, no. 12, 1962, 68, abstract 12V441  
(Vychisl. matematika, Collection 7, 1961, 161 - 169)

TEXT: At the present time two directions have taken shape in the domain of programming automation: the method of compilers and the creation of program libraries. The latter method, making greater use of manual programming, is largely free of the drawbacks of the former (greater volume of data, the finite number of types of admissible operators, the impossibility of extending the compiler language without altering the compiler program itself). In the opinion of the authors, the ideal method would be one combining both of these directions. The principles are proposed for organizing a program library created for that purpose. The viewpoint adhered to considers the library program as a set of blocks with a certain distinguished block (the master program itself). The programmer needs to know only the essential meaning of the blocks, while the remaining data concern-

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Principles of organization and utilization of ....

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ing them (the possible initial addresses, the program of calculating the block length as a function of the parameters, data as to the interrelations with the blocks of other programs) are required only by the automation system operating that library. Both compilers and compiling and interpreting systems may form such a system. As applied to the projected АЛГОЛ (ALGOL) language an address to a library program with number N could have the form: procedure N ( $M_1, M_2, \dots, M_k$ )  $\Rightarrow$  ( $M_{k+1}, M_{k+2}, \dots, M_s$ ), where  $M_1, \dots, M_k$  are the names of the input blocks, and  $M_{k+1}, \dots, M_s$  are the names of the output blocks and the output symbol. All the information relating to the problem is here established from the coincidence of the identifiers of the respective blocks.

V.L. Yevteyev

[Abstracter's note: Complete translation]

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C111/C222

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AUTHOR: Nagornyy, N.M.

TITLE: The realization of functions in alphabets by algorithms of a certain class

PERIODICAL: Akademiya nauk SSSR. Doklady, v.140, no. 1, 1961, 52-55

TEXT: The author investigates the question for the minimal alphabet of normal algorithms over the given alphabet. The paper uses notions and notations of (Ref. 1 : A.A. Markov, Tr.Matem.inst. imeni V.A. Steklova AN SSSR, 42 (1954); Ref. 2 : N.M. Nagornyy, Tr.Matem.inst. imeni V.A. Steklova AN SSSR, 52,7 (1958) ; Ref. 3 : N.M. Nagornyy, Tr.Matem.inst. imeni V.A. Steklova AN SSSR, 52,66(1958)).  
A constructively given partial transformation of the set of words in A is called a function in the alphabet A. Let  $f$  be a function in A and  $\mathcal{A}$  be an algorithm over A. Let  $\mathcal{A}$  realize  $f$  if for every word  $P$  in A it holds the conditional (Ref. 1) equality  $\mathcal{A}(P) \simeq f(P)$ . Two systems of words in A with the same number of terms are called matched. Let  $P$  be a word in A and  $U = (U_1, \dots, U_n)$ ,  $V = (V_1, \dots, V_n)$  be two matched systems of words in A. Let  $P_0 = P$ ,  $P_{i+1} = \sum (P_i, U_{i+1}, V_{i+1})$  ( $i = 0, 1, \dots, n-1$ ). Here  
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The realization of functions ...

$\sum (P, Q, R)$  means the result of the substitution of  $R$  instead of the first appearance of  $Q$  in  $P$ ,  $\sum$  is not defined if  $Q$  does not occur in  $P$ , cf (Ref. 1).  $P_n$  is denoted by the symbol  $\{P, U, V\}$ . Let  $P$  be a word in  $A$  and  $U = (U_1, \dots, U_m)$  be a system of words in  $A$ ; then  $P$  is called a word of the type  $U$  if there exist entrances  $W_1, \dots, W_m$  in  $P$  so that  $W_i$  is the entrance of the word  $U_i$  and  $W_i \neq W_j$  for  $i \neq j$ . A function  $f$  in  $A$  is called covering if for every system of words  $U$  in  $A$  there exists a word  $Q$  in  $A$  so that  $f(Q)$  is defined and is a word of the type  $U$ .  
Theorem 1: Let  $f$  be a covering function in the alphabet  $A$  so that for two arbitrary matched systems of words  $U$  and  $V$  in  $A$  there exists a word  $P$  in  $A$  so that  $f(P)$  and  $\{P, U, V\}$  are defined and  $f(P) \neq \{P, U, V\}$ . Then  $f$  can be realized in the alphabet  $A$  by no algorithm of the type  $\sigma$  (cf. (Ref. 2)).  
From theorem 1 which is proved by a reduction of the algorithms of the type  $\sigma$  to a canonical form there result some further theorems, e.g.:

Theorem 2: Let the covering function  $f$  in the alphabet  $A$  have the property: For every word  $P$  in  $A$  there exist words  $Q$  and  $R$  in  $A$  so that  $P$  occurs

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The realization of functions ....

in  $Q$ ,  $f(Q)$  and  $f(QR)$  are defined and  $f(QR) \neq f(Q)R$ . Such a function can be realized in the alphabet  $A$  by no algorithm of the type  $\sigma$ .

Theorem 6 : If  $n \geq 2$  then a function  $f_n$  in  $A$  which satisfies the condition  $f_n(P) = \underbrace{P \dots P}_{n\text{-times}}$  ( $P$  - word in  $A$ ), can be realized in  $A$  by no algorithm of the type  $\sigma$ .

Theorem 11 : The minimal alphabet of the algorithms of the type  $\sigma$  over the alphabet  $A$  is a one-letter-extension of  $A$ .

The author points to peculiarities of the algorithms of the type  $\sigma$  in a one-letter-alphabet.

Analogous questions are treated for algorithms defined with the aid of the Turing-machines. Turing-machines having expanding finite bands are used for the definition of the algorithms. It is stated that the defined algorithms - so-called  $T$  - algorithms - have the alphabet  $A$  itself as the minimal alphabet over the alphabet  $A$ .

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